



## Auburn University



### Master of Industrial and Systems Engineering & MBA (Dual Degree)

#### STUDENT DATA:

NAME: ROADMAP'S DEGREE

SSN: 000-00-0000

Credit Required	Potential Credit
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#### Facilities Design and Operation (INSY 6236)

3.00

Coreq., INSY 3700. Facilities design problems that seek to efficiently balance the need of production, material handling, information flow and the human operator. Warehousing operations and material handling problems.

#### Production and Inventory Control Systems (INSY 6246)

3.00

Prereq., INSY 3700. Analysis and design of production and inventory control systems with emphasis on quantitative methods, algorithms, and information technology.

#### Manufacturing / Production Economics (INSY 6606)

3.00

Prereq., INSY 3600. Continuation of INSY 3600. Emphasis on design economics and cost estimating techniques and applications to various manufacturing and service operations.

#### Ergonomics I (INSY 7066)

3.00

Prereq., INSY 3020. Overview of the human body systems and evaluation of the physiological response of the human body to occupational activities with emphasis on task design.

#### Advanced Engineering Statistics I (INSY 7306)

3.00

Prereq., STAT 3610. Advanced concepts of experimental design including blocked designs, analysis of variance regression approach, and fractional factorials in base-2 designs. Emphasis throughout is on developing and improving industrial products and processes. Credit will not be given for both INSY 7300 and STAT 7300.

#### Linear and Integer Programming (INSY 7426)

3.00

Prereq., INSY 3410. Linear and integer programming emphasizing solution techniques and theory.

#### Master's in ISE Research Project (INSY 7986)

3.00

Prereq., departmental approval. Non-thesis master's project. Course may be repeated for a maximum of 5 credit hours.

#### Financial Analysis (BUSI 7116)

3.00

This course studies financial decision making for managers within a corporation. The course is an in-depth look at business finance concepts including cash flows, working capital management, valuation, financial

markets, capital budgeting, leasing, financial statement analysis, financial planning mergers, and dividend policy.

**Quantitative Analysis for Business Decisions (BUSI 7126) 3.00**

This is an integrated course in statistical methods and management science. Students will master the application of statistical methods for business decision making. Students will master the application of management science methods for business decision making. Students will become competent in the use of spreadsheets and other quantitative analysis software. Students will use quantitative analysis in addressing real business decisions.

**Strategic Analysis and the Competitive Environment (BUSI 7136) 3.00**

Integrated course covering business strategy and the external environment in a global context.

Course objectives: to identify and utilize the elements of business strategy formulation in a global context; to identify the key elements of macroeconomic conditions and policies that are part of the external environment affecting businesses; to acquire an understanding of the elements of the competitive industry structure and change which affect business strategies; and to develop an understanding of pricing strategies and non-price competitive strategies in the marketing process.

**Organizational Leadership and Change (BUSI 7146) 3.00**

Integrated course covering aspects of individual and group behavior and assessment in organizations, effective team building, and leading organizations through change.

Course objectives: to enhance skills as effective communicators, to develop skills in the management and assessment of employees in the workplace; and to develop the management skills necessary to lead people and organizations.

**Marketing and Consumer Theory (BUSI 7216) 3.00**

Combines elements of the economics of demand theory and marketing management. Includes advanced pricing topics and the competitive environment.

Course objectives: to facilitate graduate level understanding of the complexities of marketing management. Specifically, this course is an integrative strategic perspective of the nuances of environmental analyses, problem and opportunity assessment and strategic action plans, solidly grounded on the economics of demand theory and dynamic market analysis.

**Operations & Information Technology (BUSI 7226) 3.00**

The structure of business operations and the role that information technology plays in formulating and implementing strategies for competitive advantage.

Course objectives: to give MBA students a basic model of how operations and information technology can create competitive advantage for organizations. To achieve this, the students will explore how information technologies and operations management principles interact.

**Cost Analysis and Systems (BUSI 7236)****3.00**

Integrates production and cost theory from economics with managerial cost accounting theory and systems for MBA students.

Course objectives: to familiarize the students with the economic concepts of opportunity cost, and measures such as fixed, variable, total and marginal cost; to familiarize the student with productions and cost theory, and the implications of the firm's cost structure on the optional structure of the firm; to understand the accounting concept of costs and the accounting systems that allow managers to measure and track those costs; and to understand cost information and further, be able to apply that information in a business decision making context.

**Integrated Business Project and Case Analysis (BUSI 7986)****3.00**

Course which integrates knowledge gained from MBA classes and applies that knowledge to address actual business problems.

Course will demonstrate the ability to apply the knowledge gained from their course work to real business issues. They will demonstrate this ability through written reports and oral presentations. The general idea for this course is that students will work with businesses in the region on substantive issues that will utilize the education the students have been pursuing in the previous year of the MBA program. They will apply their research and analytical skills, and their oral and written communication skills in this class.

**Electives or Transfer credit****9.00**

Visit the Auburn University website for a description of courses.

**Graduate credit, application of which must be determined by Admissions**

**TOTAL .....**

**54.00****0.00**

Thank you for requesting support from the U.S. Coast Guard Institute (CGI). Whereas we serve as an activity in support of your unit Educational Services Officer (ESO), you are encouraged to seek assistance from your local ESO in your academic endeavors. The following information is provided to help you understand what is presented in this degree plan:

NOTE FOR ALL STUDENTS: Every reasonable effort to attain accuracy has been made; no responsibility is assumed for clerical errors or errors occasioned by honest mistake. Should you discover an error, it is your responsibility to report it immediately to your advisor.

Auburn has been cited by several of the nation's most selective college guides as one of the best universities in the United States. US News and World Report ranked Auburn as the 27th Best Value of National Universities; Kiplinger's Personal Finance Magazine rated Auburn among the top 20 Public Universities in the United States; and The Chronicle of Higher Education ranks Auburn among the nation's Top 100 Research Institutions.

Are you looking for an opportunity to pursue a master's degree in Industrial and

Systems Engineering while still maintaining full-time employment?

The Auburn University Samuel Ginn College of Engineering allows you to pursue your dream degree at your home or work site through its video-based distance education program.

This program combines elements of traditional instruction with modern day delivery methods to extend educational opportunity beyond the limits of campus, allowing you to improve your educational credentials without disrupting your career or relocating your family.

The Auburn University Samuel Ginn College of Engineering provides some of the necessary curriculum for you to earn your non-thesis Master of Industrial and Systems Engineering through distance education.

The program is a flexible, videotape-based adaptation of the traditional or on-campus program. Graduate level courses are taped in our multimedia classrooms while the classes are being conducted. Videotapes in 1/2 inch standard VHS format are then mailed on the day of the class and are usually available for you the day after the on-campus class session.

As a distance education student, you are expected to complete the same homework assignments and take the same exams as on-campus students. In effect, you are in the same class and receiving the same quality instruction as on-campus students.

Immediate access to professors and classmates is available through the Internet and other communications technologies. You can communicate by telephone, fax, mail and e-mail. In addition, advisors will set aside designated telephone time for you.

Unfortunately, many prerequisites are not available through distance education at Auburn University. Not all departmental courses are offered as distance education courses, but all core courses are.

While most graduate students in Industrial and Systems Engineering have an engineering background, it is not a requirement. However, there is a set of core courses all ISE students must have taken (prerequisites), which assume certain background requirements. They include:

- > Math through differential equations (2 years)
- > Calculus based physics (1 year)
- > Operations research (1 year)
- > Engineering economics (1 year)

The MS and Ph.D. degrees both require an on campus residency period (1 to 2 semesters respectively). These graduate school requirements cannot be waived. The MISE has no residency requirement.

It is not necessary for a student to have a Masters degree to enter the Ph.D. program. However, we do recommend a student do a Masters degree before entering the Ph.D. program.

#### MISE Degree Requirements

### Graduate School Minimum Requirements:

A minimum of 15 semester credits in 7000/8000 level courses.  
A minimum of 21 semester credits in the major area.  
A minimum of 24 semester credits taken at Auburn.

Master of Industrial and Systems Engineering available with:  
30 semester hours of course work of which 18 hours are from a set of core courses.  
Nine hours of electives  
Three-hour design project

### Other Requirements

Each candidate must pass an on-campus final examination covering the course work taken for this degree.

The Graduate School allows you 5 years from the time of admittance to complete the degree program.

This program offers professionals the opportunity to continue their education while maintaining full-time employment, wherever they may be located. It also allows full-time students to accept a job and complete their degree off-campus, an option most other MBA programs cannot offer. The distance MBA Program gives full-time working professionals the opportunity to earn a fully accredited MBA degree in less than two years without career interruption.

\* This degree will enable you to be more effective and enhance your understanding of how to maneuver in today's business world.

\* The curriculum combines the essential MBA core disciplines (accounting, finance, marketing, economics and management) with specialized courses to provide a global perspective on business. In addition, we offer a specialized concentration in Technology Management.

\* The MBA Program is AACSB (The Association to Advance Collegiate Schools of Business) accredited.

Video-based MBA students receive the same instruction as on-campus students and complete all class assignments and tests. Students from across the United States in Fortune 500 companies, small firms, and all branches of the Military are currently earning an Auburn MBA through the Distance Learning program. Short on-campus residencies of approximately five days may be scheduled once or twice per year during this degree program.

Admission is very selective for the limited number of slots available each Fall and Spring semester. Admission is limited to residents of the United States and Canada as well as active US Military Personnel.

The GMAT is required for all of our MBA Programs except for the Physicians MBA Program.

Program Costs (Subject to change)  
Graduate School Application Fee \$25  
Video Engineering Course Fee per credit hour \$514  
Minimum number of semester credit hours 30  
Graduation Fee (billed during graduation semester) \$20  
GRAD 7000 (billed only if taken during graduation semester) \$263  
Total Estimated Program Cost \$15,231

Textbooks and course materials are not included.

For additional information on the graduate program contact:

Dr. George Blanks  
College of Engineering Extension Director  
217 Ramsey Hall  
Auburn University, AL 36849-5331  
1-334-844-5759  
E-mail: blankgw@auburn.edu  
Website: <http://www.eng.auburn.edu>

POLICY NOTES:

A minimum of 15 semester credits in 7000/8000 level courses.  
A minimum of 21 semester credits in the major area  
A minimum of 24 semester credits taken at Auburn.

This college is rated as one of the nation's best in U.S. News & World Report's  
"America's Best Colleges" issue.

Evaluation completed by: Charles Morrison

On: 27 July 2007